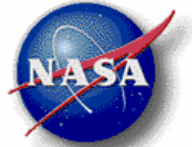




Alpha Magnetic Spectrometer  
NASA / DOE

# Alpha Magnetic Spectrometer Configuration Control Board (CCB) Minutes



National Aeronautics and  
Space Administration

February 9, 2005  
Building 1, Room 920L  
2:00 – 4:00 pm

## Attendees

CCB members and other attendees are listed in Attachment 1.

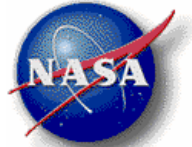
## Agenda Item 1: Change Requests

- Change Request AMS-02/P-009: Build Additional USS and Support Equipment
  - This change request was not ready for approval, not all cost information was in.
  - David Kaplan/NT submitted expenses for S&MA to Trent Martin/EA. Dollars will need to be converted from FY05 dollars to FY06 dollars.
  - Mike Capell/AMS requested more time to review proposal.
  - Steve Porter/EA requested that ESCG provide him with the cost estimate prior to presenting it to the CCB.
  - Bill Hungerford/AMS disapproved the CR. If modifications are being made to the design can the modifications he requested in CR AMS-02/G-006: Modification to Primary Support Stand for Shipping in Mid-Configuration be incorporated in the 2<sup>nd</sup> USS.
  - Leland Hill/ESCG questioned if the redesign would impact the design and safety.
  - Paul Nemeth/ESCG wondered if there was a redesign, would there really be enough gained to make it worth the time and expense.
  - New Action Item (05-001) - Ross Harold/ESCG and Bill Hungerford/AMS: Get together and discuss the pros/cons of CR and impact to the schedule. Steve Porter doesn't want this to impact the critical path. If it is in the critical path, it will not be considered. Action item due date is February 23, 2005.
  - New Action (05-002) – Paul Nemeth/ESCG: Brief Steve Porter/EA on the pros/cons and impact to schedule, concept, and costs before the next CCB so that the CR with modifications can be approved. Action item due date is February 23, 2005.



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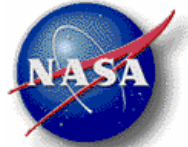
February 9, 2005

- ❑ Change Request AMS-02/D-010: Baseline AMS-02 Structural Verification Plan for the Space Transportation System and the ISS
  - New Action (05-003) – Chris Tutt/ESCG: Steve Porter/EA requested a write up about any open action items regarding SSP57003.
  - Win Reid/OZ working the issue and requested two weeks to complete.
  - All open action items where the initiator is PEI will be brought for review at next CCB on February 23, 2005.
  - New Action (05-004) – Chris Tutt/ESCG and Vic Sanders/Boeing: Work on closure plans for all open Boeing PEI issues. Should also include Kornel Nagy or Hung Nguyen with structures. Steve Porter/EA wants to know who the ultimate arbitrator for structures.
  - David Kaplan/NT requested time to take modifications back to the S&MA team for review.
  - Chris Tutt/ESCG sent the document through Lance Mushung/ESCG and the Structures Working Group (SWG) and received no response.
  - Chris Tutt/ESCG mentioned that Jacobs Sverdrup has new requirements how deliverable documents are signed off.
  - This CR will stay open for now until the structures issues are resolved in 2 weeks.
- ❑ Change Request AMS-02/P-011: Modify the ROEU to be EVA Removable
  - Paul Nemeth/ESCG disapproved this CR due to safety issue. May be a better solution and need access to other options than cutting the cables/connectors.
  - Steve Porter/EA will have a discussion with the space station manager. Gene Cook/ to provide charts to Steve Porter/EA. Wants the order of magnitude for hingeable connectors.
  - Trent Martin/EA wants modification to CR to be for hingeable and to present with new expenses.
  - CR with modifications to be presented at the CCB on March 9, 2005.



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National Aeronautics and  
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February 9, 2005

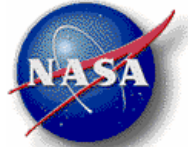
## Agenda Item 2: Open Paper Management Tool – Open Items Report

- ❑ OPMT attached as Attachment 2 is the updated version reflecting all updates and statuses provided at CCB.
- ❑ Four new actions were assigned and modifications were made to existing actions
  - Open Item 04-046: Build an integrated logic flow, assembly, and test schedule and for the payload at CERN. Include a clear plan for Quality Control and MRB Authority for the payload integration and assembly at CERN. Ensure that an iterative electrical / functional test scheme is included to ensure adequate operation of hardware / software before access to that "installed" crate or detector is no longer possible. Task assigned to Bill Hungerford/AMS.
    - Action due date was changed to July 31, 2005.
    - Trent Martin/EA was added as an actionee.
    - We will build an integrated plan at JSC to go through with the AMS Collaboration. The plan will have to be approved by the AMS Collaboration. The plan is to have:
      - A NASA representative at CERN for the integration process
      - NASA provide a quality representative to be at CERN at all time for quality control during integration process
  - Open Item 04-051: Finalize SSRMS requirements around the AMS-02. Task assigned to OZ and Bob Miley.
    - ISS ICD – turning in PIA baslined first. Still other actions to be handled (3 Kw of power the station guaranteed and duration of time for fiber optic).
    - Plan to remove the TBRs. Win Reid to check on the actions on the ISS side.
    - Action item to be discussed at next week's tag-up meeting on February 16, 2005.
  - Open Item 04-055: Review the composite panel strength testing results and requirements from the Structures Working Group with variability of data and relative paucity of data. Task assigned to Chris Tutt/ESCG.



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## Alpha Magnetic Spectrometer Configuration Control Board (CCB) Minutes



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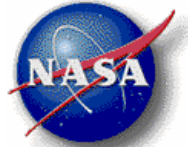
February 9, 2005

- Chris Tutt/ESCG provided data to the Structures Working Group (SWG). SWG is still looking at the data and has not provided Chris Tutt/ESCG with an update.
- Action item status to be provided at CCB meeting on February 23, 2005.
- Open Item 04-056: Provide the plan for Surveillance of Safety Critical assembly and test steps of Collaboration Hardware. Task assigned to Chris Tutt/ESCG, Bill Hungerford/AMS, and Paul Nemeth/ESCG.
  - Action item due date changed to August 15, 2005.
  - Mike Fohey/ESCG and David Kaplan/NT to discuss the MVP schedule. The MVP is a deliverable on the ESCG contract and is to be delivered no later than 8 months from February 1, 2005.
- Open Item 04-115: Investigate to see if we need a FEMA/CIL for AMS. If not, what are we doing in place of the FEMA/CIL? Task assigned to Paul Nemeth/ESCG and Mike Fohey/ESCG.
  - Action due date was changed to March 31, 2005.
  - Paul Nemeth/ESCG will write up what the options are and what we are doing.
  - Tim Urban/ESCG has looked at the issue and will write something up for comparison. Will need to coordinate with John Stanford and NT.
- Open Item AMS\_02-CDR-04: AMS will provide all design and analysis data required to meet EVR requirements per SSP 57003. Task assigned to Ross Harold/ESCG and Paul Nemeth/ESCG.
  - Steve Porter/EA is to be tagged up with this action is ready to be closed.
- Open Item AMS\_02-CDR-06: Complete analysis and coordinate design of debris shields. To be completed by Phase III Safety. Task assigned to Dana Lear/ESCG.
  - Chris Tutt/ESCG sent an email to Dana Lear/ESCG requesting a letter from Eric Christiansen/KX with the requirements and his signature.



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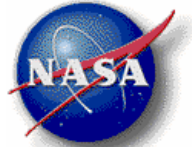
February 9, 2005

- Open Item AMS\_02-CDR-07: Update AMS-02 assembly drawings. Task assigned to Ross Harold/ESCG.
  - Model has been updated to reflect new configuration.
  - Action item was closed at CCB on February 9, 2005.
- Open Item AMS\_02-CDR-08: Work bolt concerns with the SWG. Task assigned Chris Tutt/ESCG.
  - Action item due date was changed to May 31, 2005.
  - Bolt analysis was done to Lockheed Martin standards. Structures Working Group (SWG) has new standards.
  - Currently looking to see how many interfaces have issues and what needs to be done.
  - Action item was reworded so that the action is - Work with SWG to resolve concerns with compliance with NASA-STD-08307, including bolts in sloppy holes being assumed to take shear.
- Open Item AMS\_02-CDR-10: Perform thermal assessment of UMA. Task assigned to Craig Clark/ESCG.
  - The ICD needs to be marked applicable. If marked applicable the action can be closed. If not, mark it as applicable and close action.
- Open Item AMS\_02-CDR-11 – Action 1: Provide updates to SSP 57003. Update SSP 57003 and issue. Task assigned to Tim Urban/ESCG.
  - Get with Theresa Freund for PIRN.
  - Action item was closed on February 9, 2005.
- Open Item AMS\_02-CDR-11 – Action 2: Perform analysis. Task assigned to Craig Clark/ESCG.
  - The thermal model has been released.
  - Action item was closed on February 9, 2005.



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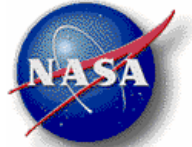
February 9, 2005

- Open Item AMS\_02-CDR-12: Supply document listing EMI/electrical specs. Task assigned to Tim Urban/ESCG.
  - Try to get initiator's approval to merge this CDR action item with AMS-CDR-4-20 (OPMT action item AMS\_02-CDR-13 by next CCB.
  - Action item due date was changed to March 31, 2005.
- Open Item AMS\_02-CDR-13: Supply EME control plan. Task assigned to Tim Urban/ESCG.
  - Try to get initiator's approval to merge this CDR action item with AMS-CDR-1-18 (OPMT action item AMS\_02-CDR-12 by next CCB.
  - Action item due date was changed to March 31, 2005.
- Open Item AMS\_02-CDR-14: Supply wire list and derating details. Task assigned to Dewey Nguyen/ESCG and Tim Urban/ESCG.
  - Dewey Nguyen/ESCG has parts list but it is more complex than needed.
  - Distilling and derating list in work.
  - Next status date is March 31, 2005.
- Open Item AMS\_02-CDR-15: Implement recommendations. Task assigned to Paul Nemeth/ESCG and Tim Urban/ESCG.
  - Waiting for Boeing import/export approval.
  - Gene Cook/OZ requested a couple of days to work this issue.
- Open Item AMS\_02-CDR-16: Implement recommendations. Task assigned to Paul Nemeth/ESCG and Tim Urban/ESCG.
  - Waiting for Boeing import/export approval.
  - Gene Cook/OZ requested a couple of days to work this issue.



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National Aeronautics and  
Space Administration

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- Open Item AMS\_02-CDR-17 - Action 1: Implement recommendations. Task assigned to Paul Nemeth/ESCG and Tim Urban/ESCG.
  - Waiting for Boeing import/export approval.
  - Gene Cook/OZ requested a couple of days to work this issue.
- Open Item AMS\_02-CDR-22: Supply EME control plan. Task assigned to Paul Nemeth/ESCG.
  - Waiting for Boeing import/export approval.
  - Gene Cook/OZ requested a couple of days to work this issue.
- Open Item AMS\_02-CDR-23: Implement recommendations. Task assigned to Paul Nemeth/ESCG.
  - Waiting for Boeing import/export approval.
  - Gene Cook/OZ requested a couple of days to work this issue.
- Open Item AMS\_02-Doc\_Review-67: Update Vacuum Case ICD as indicated. Task assigned to Phil Mott/ESCG.
  - VC ICD Change Requests to be issued shortly.

### Open Discussion

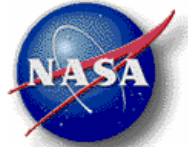
- Trent Martin/EA
  - Next AMS Project Tag-up is scheduled for February 16, 2005.
  - Next CCB is scheduled for February 23, 2005.
    - Change Request AMS-02/P-009: Build Additional USS and Support Equipment will be presented for approval.
    -



Alpha Magnetic Spectrometer  
NASA / DOE

## Alpha Magnetic Spectrometer Configuration Control Board (CCB) Minutes

February 9, 2005



National Aeronautics and  
Space Administration

- Change Request AMS-02/D-010: Baseline AMS-02 Structural Verification Plan for the Space Transportation System and the ISS will be presented for approval.

Trent Martin adjourned meeting at 3:28 pm.

Minutes Approval: \_\_\_\_\_

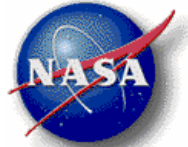




Alpha Magnetic Spectrometer  
NASA / DOE

# Alpha Magnetic Spectrometer Configuration Control Board (CCB) Minutes

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National Aeronautics and  
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## Attachment 1

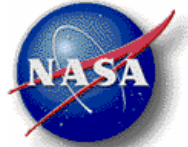
## CCB Sign-in Sheet



Alpha Magnetic Spectrometer  
NASA / DOE

# Alpha Magnetic Spectrometer Configuration Control Board (CCB) Minutes

February 9, 2005



National Aeronautics and  
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## Attachment 2

## Open Action Items Matrix



Alpha Magnetic  
Spectrometer NASA / DOE

# *Open Paper Management Tool* *Open Items Report*



National Aeronautics and  
Space Administration

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## *Open Items Report*

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*Open Item Number:* 04-046

*RID Open Date:* 8/1/2004

*RID Closure Date:*

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*Title:*

*Affected Document:*

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*Initiator(s):*

*Initiator(s) Phone Number:*

---

*Description:*

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*RID Disposition:*

*RID Status:*

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*Action Item Information*

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## Open Items Report

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**Action Number:** 1    **Actionee(s):** Bill Hungerford/AMS  
Trent Martin/EA

**Phone Number(s):**  
281-483-3296

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**Action Due Date:** 7/31/2005

**Action Completion Date:**

---

**Action** *Build an integrated logic flow, assembly, and test (LFAT Schedule?) schedule and for the payload at CERN. Include a clear plan for Quality Control and MRB Authority for the payload integration and assembly at CERN. Ensure that an iterative electrical / functional test scheme is included to ensure adequate operation of hardware / software before access to that "installed" crate or detector is longer possible.*

---

**Action Status:** *02/09/05 - We will build an integrated plan at JSC to go through with the AMS Collaboration. The plan will have to be approved by the AMS Collaboration. The plan is to have: (1) NASA representative at CERN for the integration process and (2) NASA provide a quality representative to be at CERN at all time for quality control during integration process*

*01/19/05 - briefed by G. Laureti/AMS at KSC TIM; facility at Geneva looking for alternative; STA magnet test here at JSC IBG, Aachen (proposed by K. Lubelsmeyer/AMS), or ETH Zurich; Looking into options as backup to CERN (Aguilar/AMS working the issue); T. Martin/EA wants G. Laureti's schedule to be in scheduling format.*

*12/10/04 - Discuss issue at KSC TIM in January 2005; splinter meeting of detectors*

*11/17/04 - To be discussed at the Integration meeting being held at CERN December 7-9, 2004*

*08/01/04 - Plan due by 09/18/04; Questionnaire sent to detector groups to initiate process. Meeting scheduled at CERN September 13 and 14, chaired by Giuliano Laureti, to consolidate and refine inputs from various detector and sub-system groups. Should result in development of preliminary LFAT Schedule for review at October TIM*

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## Open Items Report

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**Open Item Number:** 04-051

**RID Open Date:** 8/1/2004

**RID Closure Date:**

**Title:**

**Affected Document:**

**Initiator(s):**

**Initiator(s) Phone Number:**

**Description:**

**RID Disposition:**

**RID Status:**

---

### Action Item Information

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**Action Number:** 1    **Actionee(s):** OZ/Bob Miley

**Phone Number(s):**

**Action Due Date:** 2/28/2005

**Action Completion Date:**

**Action** Finalize SSRMS requirements around the AMS-02

**Action Status:** 02/09/05 - ISS ICD – turning in PIA baslined first. Still other actions to be handled (3 Kw of power the station guarantee duration of time for fiber optic). Plan to remove the TBRs. Win Reid to check on the actions on the ISS side. Action item to be discussed at next week's tag-up meeting on February 16, 2005.

12/10/04 - ISS ICD to be released 02/05; question how to get into official documentation; New status to be provided in Ja

11/17/04 - Add PIRN/Waiver

09/29/04 - To be discussed at the CCB on 10/27/04

08/11/04 - Needs hazard report

08/01/04 - Plan due by 09/18/04

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## *Open Items Report*

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*Open Item Number:* 04-055

*RID Open Date:* 8/1/2004

*RID Closure Date:*

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*Title:*

*Affected Document:*

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*Initiator(s):*

*Initiator(s) Phone Number:*

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*Description:*

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*RID Disposition:*

*RID Status:*

---

*Action Item Information*

---

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## Open Items Report

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**Action Number:** 1    **Actionee(s):** Chris Tutt/ESCG

**Phone Number(s):** 281-461-5703

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**Action Due Date:** 1/30/2005

**Action Completion Date:**

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**Action** Review the composite panel strength testing results and requirements from the Structures Working Group with variability of data relative paucity of data.

---

**Action Status:** 02/09/05 - Chris Tutt/ESCG provided data to the Structures Working Group (SWG). SWG is still looking at the data and has not provided Chris Tutt/ESCG with an update. Action item status to be provided at CCB meeting on February 23, 2005.

01/19/05 - C. Tutt/LMSO received a phone call from P. Romine, there is enough concern on whether test cases run on allowable; Issue is being worked, no date given for completion

01/05/05 - Chris Tutt will get this done shortly

12/10/04 - Chris Tutt has met with Lockheed Martin SWG; acceptance needs to be by NASA SWG; requested meeting, but received no response; send list of issues and what needs letter to Win Reid and John Stanford.

10/05/04 - Chris Tutt setting up meeting with SWG

08/01/04 - Plan due by 09/18/04

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## *Open Items Report*

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*Open Item Number:* 04-056

*RID Open Date:* 8/1/2004

*RID Closure Date:*

*Title:*

*Affected Document:*

*Initiator(s):*

*Initiator(s) Phone Number:*

*Description:*

*RID Disposition:*

*RID Status:*

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### *Action Item Information*

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*Action Number:* 1    *Actionee(s):* Chris Tutt/ESCG  
Bill Hungerford/AMS  
Paul Nemeth/ESCG

*Phone Number(s):* 281-461-5703  
281-461-5715

*Action Due Date:* 8/15/2005

*Action Completion Date:*

*Action* Provide the plan for Surveillance of Safety Critical assembly and test steps of Collaboration Hardware.

*Action Status:* 02/09/05 - Mike Fohey/ESCG and David Kaplan/NT to discuss the MVP schedule. The MVP is a deliverable on the ESCG contract and is to be delivered no later than 8 months from February 1, 2005.

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## *Open Items Report*

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*Open Item Number:* 04-069

*RID Open Date:* 8/4/2004

*RID Closure Date:*

*Title:*

*Affected Document:*

*Initiator(s):*

*Initiator(s) Phone Number:*

*Description:*

*RID Disposition:*

*RID Status:*

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### *Action Item Information*

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*Action Number:* 1    *Actionee(s):* Leland Hill/ESCG  
Chris Tutt/ESCG

*Phone Number(s):* 281-461-5701  
281-461-5703

*Action Due Date:* 5/1/2005

*Action Completion Date:*

*Action* Coordinate closeout photo tasks; Need to verify we get closeout photos before hardware is closed up; Need update the pre-flight imagery plan

*Action Status:* 10/05/04- final documentation must be done after Surveillance Plan for Safety Critical Structure

09/29/04 - Draft documentation is complete

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## *Open Items Report*

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*Open Item Number: 04-115*

*RID Open Date: 11/29/2004*

*RID Closure Date:*

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*Title:*

*Affected Document:*

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*Initiator(s):*

*Initiator(s) Phone Number:*

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*Description:*

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*RID Disposition:*

*RID Status:*

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### *Action Item Information*

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*Action Number: 1    Actionee(s): Paul Nemeth/ESCG  
Mike Fohey/ESCG*

*Phone Number(s): 281-461-5715  
281-461-5684*

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*Action Due Date: 3/31/2005*

*Action Completion Date:*

---

*Action Investigate to see if we need a FEMA/CIL for AMS. If not, what are we doing in place of the FEMA/CIL?*

---

*Action Status: 02/09/05 - Paul Nemeth/ESCG will write up what the options are and what we are doing. Tim Urban/ESCG has looked at issue and will write something up for comparison. Will need to coordinate with John Stanford and NT.*

*01/05/05 - presentation to be given at CCB in March 2005*

*12/08/04 - presentation to be given at CCB on January 5, 2005*

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## *Open Items Report*

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*Open Item Number: 04-117*

*RID Open Date:*

*RID Closure Date:*

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*Title:*

*Affected Document:*

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*Initiator(s):*

*Initiator(s) Phone Number:*

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*Description:*

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*RID Disposition:*

*RID Status:*

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### *Action Item Information*

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*Action Number: 1    Actionee(s): Craig Clark/ESCG  
Joe Burger/AMS*

*Phone Number(s): 281-461-5714*

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*Action Due Date: 3/31/2005*

*Action Completion Date:*

---

*Action    Extending Magnet Life - Make sure we have the capability to provide 150W of power into the  
cryo-coolers (-vs- the 100W nominal power).*

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*Action Status: 01/05/05 - Craig Clark/LMSO staed that we have the capability to run at 150W per GSFC.*

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## *Open Items Report*

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*Open Item Number:* 04-120

*RID Open Date:* 12/6/2004

*RID Closure Date:*

*Title:*

*Affected Document:*

*Initiator(s):*

*Initiator(s) Phone Number:*

*Description:*

*RID Disposition:*

*RID Status:*

---

### *Action Item Information*

---

*Action Number:* 1    *Actionee(s):* Leland Hill/ESCG

*Phone Number(s):* 281-461-5701

*Action Due Date:* 3/31/2005

*Action Completion Date:*

*Action* Work with all AMS experimenters to close out all open issues associated with the Phase II Flight Safety Review Safety Data Package

*Action Status:* 01/19/05 - Some data has been received since the October TIM and January TIM; Some data not due until March 2005; . date was cahged from 01/31/05 to 03/31/05; Final Safety Data Package due 03/08/05.

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## *Open Items Report*

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*Open Item Number:* 05-001

*RID Open Date:* 2/9/2005

*RID Closure Date:*

*Title:*

*Affected Document:*

*Initiator(s):*

*Initiator(s) Phone Number:*

*Description:*

*RID Disposition:*

*RID Status:*

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### *Action Item Information*

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*Action Number:* 1    *Actionee(s):* Ross Harold/ESCG  
Bill Hungerford/AMS

*Phone Number(s):* 281-461-5713

*Action Due Date:* 2/23/2005

*Action Completion Date:*

*Action* Get together and discuss the pros/cons of CR and impact to the schedule. Steve Porter doesn't want this to impact the critical path. If this is in the critical path, it will not be considered.

*Action Status:*

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## *Open Items Report*

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*Open Item Number:* 05-002

*RID Open Date:* 2/9/2005

*RID Closure Date:*

*Title:*

*Affected Document:*

*Initiator(s):*

*Initiator(s) Phone Number:*

*Description:*

*RID Disposition:*

*RID Status:*

---

### *Action Item Information*

---

*Action Number:* 1    *Actionee(s):* Paul Nemeth/ESCG

*Phone Number(s):* 281-461-5715

*Action Due Date:* 2/23/2005

*Action Completion Date:*

*Action* Brief Steve Porter/EA on the pros/cons and impact to schedule, concept, and costs before the next CCB so that the CR with modifications can be approved.

*Action Status:*

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## *Open Items Report*

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*Open Item Number:* 05-003

*RID Open Date:* 2/9/2005

*RID Closure Date:*

*Title:*

*Affected Document:*

*Initiator(s):*

*Initiator(s) Phone Number:*

*Description:*

*RID Disposition:*

*RID Status:*

---

### *Action Item Information*

---

*Action Number:* 1    *Actionee(s):* Chris Tutt/ESCG

*Phone Number(s):* 281-461-5703

*Action Due Date:* 2/23/2005

*Action Completion Date:*

*Action* Steve Porter/EA requested a write up about any open action items regarding SSP57003.

*Action Status:*



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## *Open Items Report*

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*Open Item Number:* 05-004

*RID Open Date:* 2/9/2005

*RID Closure Date:*

*Title:*

*Affected Document:*

*Initiator(s):*

*Initiator(s) Phone Number:*

*Description:*

*RID Disposition:*

*RID Status:*

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### *Action Item Information*

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*Action Number:* 1    *Actionee(s):* Chris Tutt/ESCG  
Vic Snaders/Boeing

*Phone Number(s):* 281-461-5703

*Action Due Date:* 2/23/2005

*Action Completion Date:*

*Action* Work on closure plans for all open Boeing PEI issues. Should also include Kornel Nagy or Hung Nguyen with structures. Steve Porter/EA wants to know who the ultimate arbitrator for structures.

*Action Status:*

---

## Open Items Report

---

**Open Item Number:** AMS\_02-CDR-01

**RID Open Date:** 5/1/2003

**RID Closure Date:**

**Title:** AMS-CDR-1-10: Lack of Safety Information/ Documentation for the Thermal Control System (TCS)

**Affected Document:** JSC 28792

**Initiator(s):** H. Flynn/NASA-JSC

**Initiator(s) Phone Number:** 281-483-1198

**Description:** From the limited information provided in Table E2, it is not possible to determine the safety requirements compliance of the Missing information includes: a system schematic, quality and type of working fluid, brief explanation(s) of the subsystem Maximum Design Pressure (MDP) determinations, itemized list of each part number/component, etc

**RID Disposition:** Approved

**RID Status:** Closure Pending Documentation

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### Action Item Information

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**Action Number:** 1    **Actionee(s):** Chris Tutt/ESCG

**Phone Number(s):** 281-461-5703

**Action Due Date:** 3/31/2005

**Action Completion Date:**

**Action** Provide information in Phase II Safety Data Package and SVP will be updated.

**Action Status:** 01/19/05 - Due date changed from 01/30/05 to 03/31/05.

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## Open Items Report

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**Open Item Number:** AMS\_02-CDR-04

**RID Open Date:** 5/1/2003

**RID Closure Date:**

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**Title:** AMS-CDR-1-14: Lack of EVR Data in CDR Package

**Affected Document:**

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**Initiator(s):** A. Mootty/Boeing PEI

**Initiator(s) Phone Number:** 281-226-4605

---

**Description:** The CDR package is lacking data (both design and analysis data) on the AMS-02 EVR accommodations for assessment of robotics compatibility with SSP 57003 requirements.

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**RID Disposition:** Approved

**RID Status:**

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### Action Item Information

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**Action Number:** 1    **Actionee(s):** Ross Harold/ESCG  
Paul Nemeth/ESCG

**Phone Number(s):** 281-461-5633  
281-461-5715

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**Action Due Date:** 1/30/2005

**Action Completion Date:**

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**Action** AMS will provide all design and analysis data required to meet EVR requirements per SSP 57003.

---

**Action Status:** 02/09/05 - Steve Porter/EA is to be tagged up with this action is ready to be closed.

01/19/05 - C. Tutt/LMSO and R. Harold/LMSO to discuss all open issues; C. Tutt/LMSO to send email to W. Reid/OZ to let know when LMSO is ready to meet with Boeing PEI and W. Reid/OZ will set-up meeting; Meeting should also include T. Martin/EA and G. Cook; Any open action with Boeing PEI needs to be brought to the CCB so that the CDR items can be closed.

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## *Open Items Report*

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**Open Item Number:** AMS\_02-CDR-05

**RID Open Date:** 5/1/2003

**RID Closure Date:**

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**Title:** AMS-CDR-1-15: AMS-02 Passive Payload Attach System (PAS)

**Affected Document:** N/A

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**Initiator(s):** M. Whitworth/Boeing PEI

**Initiator(s) Phone Number:** 281-226-4234

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**Description:** SSP 57003 para. 3.1.1.2.3 (Design Loads) requires that the PAS/UCCAS interface shall be designed to withstand the interf loads in Table 3.1.1.2.3-2 combined with the preload defined in paragraph 3.1.3.1.3.1 and the thermal loads derived from environment defined in paragraph 3.5.1.12. Paragraph 3.5.1.12 states to use 0.2G and 0.4G on orbit load factors. This an used the interface loads and back-calculated the on-orbit load factors which were less than 0.05 G's. This calculation metl not appropriate.

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**RID Disposition:** Approved

**RID Status:** Open due to pending action

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### *Action Item Information*

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## *Open Items Report*

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**Action Number:** 2    **Actionee(s):** Chris Tutt/ESCG

**Phone Number(s):** 281-461-5703

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**Action Due Date:** 10/20/2004

**Action Completion Date:**

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**Action** Update SVP and complete analysis.

---

**Action Status:** 01/05/05 - Per Chris Tutt/LMSO the SVP is updated. Talked to PEI and they refuse to closed the RID with no justification  
Note: M. Witworth has left the company so V. Sanders has taken over RID.

Chris Tutt/LMSO to send PEI responses to Win Reid/NT and Win will work it through his contact at PEI.

RID and OPMT item will be closed as soon as the Change Request and document have been approved.

12/08/04 - currently in internal review cyle at Lockheed Martin; to be sent out within 2 weeks to be approved at CCB on 01/05/05.

10/05/04 - SVP updated, still needs signature

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## Open Items Report

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**Open Item Number:** AMS\_02-CDR-06

**RID Open Date:** 5/1/2003

**RID Closure Date:**

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**Title:** AMS-CDR-1-17: Meteoroid/Orbital Debris Shielding

**Affected Document:** AMS-02 CDR Version 2

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**Initiator(s):** E. Christiansen/NASA

**Initiator(s) Phone Number:** 281-483-5311

---

**Description:** Shielding from meteoroid/debris impact is inadequate to meet protection requirements. Shielding of pressurized vessels on AMS-02 such as the vacuum case and TRD (as well as any other pressure vessel) is required to prevent catastrophic rupture of tanks in the event of meteoroid/debris impact which would release high-velocity fragments creating a potentially serious safety issue for on-board crew. The assessed probability of no penetration (PNP) using specified environment models is 0.97 which is far below the specified 0.997 PNP requirement. Updating ballistic limit equations and models as described in the forward review plan does not appear adequate to show compliance with requirements. Additional or significantly enhanced shielding will likely be necessary to meet safety requirements.

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**RID Disposition:** Approved

**RID Status:** Open - Deferred to next cycle review

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### Action Item Information

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**Action Number:** 1    **Actionee(s):** Dana Lear/ESCG

**Phone Number(s):** 281-483-2998

---

**Action Due Date:** 7/1/2006

**Action Completion Date:**

---

**Action** Complete analysis and coordinate design of debris shields. To be completed by Phase III Safety.

---

**Action Status:** 02/09/05 - Chris Tutt/ESCG sent an email to Dana Lear/ESCG requesting a letter from Eric Christiansen/KX with the requirements and his signature.

01/19/05 - L. Hill/LMSO to get in touch with D. Lear/LMSO to discuss what L. Hill/LMSO needs for Phase II. C. Tutt/LMSO, P. Mott/LMSO, & R. Harold/LMSO need to be involved. T. Martin/EA stated that anything pressure safety critical needs to be covered.

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## Open Items Report

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**Open Item Number:** AMS\_02-CDR-08

**RID Open Date:** 5/1/2003

**RID Closure Date:**

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**Title:** AMS-CDR-2-07: Bolt in Sloppy Holes Assured to Take Shear

**Affected Document:** N/A

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**Initiator(s):** B. Ritter/GSFC

**Initiator(s) Phone Number:** 301-286-9022

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**Description:** Bolts attaching the support ring to the conical flange were assumed to transfer shear, even though they are in sloppy holes non-conservative.

---

**RID Disposition:** Approved

**RID Status:** Open

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### Action Item Information

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**Action Number:** 1    **Actionee(s):** Chris Tutt/ESCG

**Phone Number(s):** 281-461-5703

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**Action Due Date:** 5/31/2005

**Action Completion Date:**

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**Action** Work with SWG to resolve concerns with compliance with NASA-STD-08307, including bolts in sloppy holes being assumed to take shear.

---

**Action Status:** 02/09/05 - Action item due date was changed to May 31, 2005. Bolt analysis was done to Lockheed Martin standards. Structures Working Group (SWG) has new standards. Currently looking to see how many interfaces have issues and what needs to be done. Action item was changed from 'Work bolt concerns with the SWG.' to 'Work with SWG to resolve concerns with compliance with NASA-STD-08307, including bolts in sloppy holes being assumed to take shear.'

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## Open Items Report

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**Open Item Number:** AMS\_02-CDR-09

**RID Open Date:** 5/1/2003

**RID Closure Date:**

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**Title:** AMS-CDR-2-15: Missing Documents - Structural Analysis

**Affected Document:** N/A

---

**Initiator(s):** Murthy Pinnamaneni Structures/Boeing

**Initiator(s) Phone Number:** 281-226-5665

---

**Description:** The following items were not available in the Data Package: design load factors, dynamic analysis procedure and results. 1 2.2.1, AMS Report Outline.doc, Magnetic Strap Analysis and the Coupled Loads Analysis, which are identified to be in "se sections." Reports/documents that include: Dynamic Loads Analysis Description; Payload/Shuttle Interface Loads; Trunion Deflection; Trunion Misalignment Loads; and Uncertainty Factors Used in the Analysis.

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**RID Disposition:** Approved

**RID Status:** Closure Pending Documentation

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### Action Item Information

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**Action Number:** 1    **Actionee(s):** Chris Tutt/ESCG

**Phone Number(s):** 281-461-5703

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**Action Due Date:** 7/1/2006

**Action Completion Date:**

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**Action** Update stress report and dynamics analyses reports. To be completed by Phase III Safety Data Pack.

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**Action Status:**

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## Open Items Report

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**Open Item Number:** AMS\_02-CDR-12

**RID Open Date:** 5/1/2003

**RID Closure Date:**

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**Title:** AMS-CDR-4-18: Presentation Issues

**Affected Document:** Avionics & ACOP Presentat

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**Initiator(s):** H. Hoang/PEI  
J. Fu/PEO

**Initiator(s) Phone Number:** 281-226-6054

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**Description:** The presentation for avionics is not adequate for documentation purpose to show compliance with SSP 57003 requirements

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**RID Disposition:** Approved

**RID Status:** Open

---

### Action Item Information

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**Action Number:** 1    **Actionee(s):** Tim Urban/ESCG

**Phone Number(s):** 281-461-5702

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**Action Due Date:** 3/31/2005

**Action Completion Date:**

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**Action** Supply document listing EMI/electrical specs.

---

**Action Status:** 02/09/05 - Try to get initiator's approval to merge this CDR action item with AMS-CDR-4-20 (OPMT action item AMS\_02 CDR-13 by next CCB. Action item due date was changed to March 31, 2005.

01/05/05 - Paul Nemeth/LMSO to ask initiator if this RID can be rolled into RID AMS-CDR-4-18 and Open Action Item AMS\_02-CDR-13.

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## Open Items Report

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**Open Item Number:** AMS\_02-CDR-13

**RID Open Date:** 5/1/2003

**RID Closure Date:**

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**Title:** AMS-CDR-4-20: Power Compatibility and EMC Testing

**Affected Document:** Avionics Overview

---

**Initiator(s):** H. Hoang/PEI  
J. Fu/PEO

**Initiator(s) Phone Number:** 281-226-6054

---

**Description:** The EME Control Plan (or equivalent) used to establish the plan for how AMS will be compatible with the ISS EMI requirements is lacking in the CDR package.

---

**RID Disposition:** Approved

**RID Status:** Open

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### Action Item Information

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**Action Number:** 1    **Actionee(s):** Tim Urban/ESCG

**Phone Number(s):** 281-461-5702

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**Action Due Date:** 3/31/2005

**Action Completion Date:**

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**Action** Supply EME control plan.

---

**Action Status:** 02/09/05 - Try to get initiator's approval to merge this CDR action item with AMS-CDR-1-18 (OPMT action item AMS\_02 CDR-12 by next CCB. Action item due date was changed to March 31, 2005.

01/05/05 - Tim Urban/LMSO to provide status March 2005.

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## Open Items Report

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**Open Item Number:** AMS\_02-CDR-14

**RID Open Date:** 5/1/2003

**RID Closure Date:**

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**Title:** AMS-CDR-4-24: No Cable List and Derating Analysis of Cables

**Affected Document:** N/A

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**Initiator(s):** D. Beverly/EEE

**Initiator(s) Phone Number:** 281-483-0250

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**Description:** There is no evidence of wiring or external cable list. The derating of the wire and cables has not been performed.

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**RID Disposition:** Approved

**RID Status:** Open

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### Action Item Information

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**Action Number:** 1    **Actionee(s):** Dewey Nguyen/ESCG  
Tim Urban/ESCG

**Phone Number(s):** 281-461-5681  
281-461-5702

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**Action Due Date:** 10/30/2004

**Action Completion Date:**

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**Action** Supply wire list and derating details.

---

**Action Status:** 02/09/05 - Dewey Nguyen/ESCG has parts list but it is more complex than needed. Distilling and derating list in work. No status date is March 31, 2005.

01/05/05 - Changes have been submitted and is under review by Shuttle Avionics Integration.

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## Open Items Report

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**Open Item Number:** AMS\_02-CDR-15

**RID Open Date:** 5/1/2003

**RID Closure Date:**

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**Title:** AMS-CDR-4-25: Connector Designator in AMS-02 Wiring Diagram

**Affected Document:** SIG39136082

---

**Initiator(s):** Y. Jaurigue/AG-92-J34B

**Initiator(s) Phone Number:** 281-226-5634

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**Description:** I/F Panel A P6/J6 should be P7/J7 to interface from the Standard Switch Panel (SSP), using the standard mixed cargo harness to AMS-02 control electronics per earlier agreement between the customer & USA/NASA ( ``Proposed STS cabling requirement for AMS-02 `` agreed to October 30, 2001: Danny Irvin, Mariella Hartgerink, Michael Gerlach, and Ed Walters).

---

**RID Disposition:** Approved

**RID Status:** Open

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### Action Item Information

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**Action Number:** 1    **Actionee(s):** Paul Nemeth/ESCG  
Tim Urban/ESCG

**Phone Number(s):** 281-461-5715  
281-461-5702

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**Action Due Date:** 10/30/2004

**Action Completion Date:**

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**Action** Implement recommendation.

---

**Action Status:** 02/09/05 - Waiting for Boeing import/export approval. Gene Cook/OZ requested a couple of days to work this issue.

01/05/05 - Changes have been submitted and is under review by Shuttle Avionics Integration.

10/05/04 - Paul Nemeth to check on status of action

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## Open Items Report

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**Open Item Number:** AMS\_02-CDR-16

**RID Open Date:** 5/1/2003

**RID Closure Date:**

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**Title:** AMS-CDR-4-26: AMS-02 Wiring Schematic

**Affected Document:** SIG39136082

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**Initiator(s):** Y. Jaurigue/AG-92-J34B

**Initiator(s) Phone Number:** 281-226-5634

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**Description:** 1. On sheet 3, i/f panel a connector p6/j6 should be p7/j7 to interface to the ssp via smch cabling per earlier agreement (''proposed sts cabling requirement for ams-02'' agreed in october 30, 2001: danny irvin, mariella hartgerink, michael ge and ed walters). Also the emc classification for interface wiring through j6/p6 appears to be rf. Change the shielded pair w twisted pair wires for eo, ho, or ml class wiring - where appropriate. Redlines will be given @ ams-02 cdr avionics splinter.

2. On sheet 3, the interface wiring through i/f panel a connector p5/j5 has two return line when there is only one available pin 35. Also, the 3 discrete output low signals from the mdm pf1 are available on pda connector p5 pins 32, 33 and 34.

3. On sheet 3, the interface wiring through i/f panel a connector j4/p4 is missing a pair of shielded ground wires for rs-422 and #2. Pin 9 of pda connector p4 is assigned for rs-422 #2 gnd and pin 10 of pda connector p4 is for rs422 #1.

4. On sheet 3, interface wiring from ams-02 rs-422 #1 and #2 through i/f panel a connector j4/p4 to pdip2 p103 / j103 is d from the ''proposed sts cabling requirement for ams-02'' provided to paul nemeth via e-mail from d. Irvin on 12/07/2001 a boeing control schematic vs72-config 1 last revised on 11/24/2002. A unique cable will have to be built to support ams-02 requirements.

5. This drawing should show the ams-02/gfe cable required to provide connectivity between ams-02 rs-422 service and t-0 connector j59.

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**RID Disposition:** Approved

**RID Status:** Open

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### Action Item Information

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## *Open Items Report*

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**Action Number:** 1    **Actionee(s):** Paul Nemeth/ESCG  
Tim Urban/ESCG

**Phone Number(s):** 281-461-5715  
281-461-5702

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**Action Due Date:** 10/30/2004

**Action Completion Date:**

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**Action** Implement recommendation.

---

**Action Status:** 02/09/05 - Waiting for Boeing import/export approval. Gene Cook/OZ requested a couple of days to work this issue.

01/05/05 - Changes have been submitted and is under review by Shuttle Avionics Integration.

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## Open Items Report

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**Open Item Number:** AMS\_02-CDR-17

**RID Open Date:** 5/1/2003

**RID Closure Date:**

**Title:** AMS-CDR-4-28: SPHe Electronics to I/F Panel A, GPC Cable Assembly, W11

**Affected Document:** SEG39136103

**Initiator(s):** Y. Jaurigue/AG-92-J34B

**Initiator(s) Phone Number:** 281-226-5634

**Description:** Sheet 2 of the above documents has two return lines when there is only one available on J5 mating Connector P5 Pin 35. Interface from the MDM PF1 which provides 3 discrete output low signals to the AMS-02 control electronics are available connector P5 Pins 32, 33, and 34.

**RID Disposition:** Approved

**RID Status:** Open

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### Action Item Information

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**Action Number:** 1    **Actionee(s):** Dewey Nguyen/ESCG  
Tim Urban/ESCG

**Phone Number(s):** 281-461-5681  
281-461-5702

**Action Due Date:** 1/31/2005

**Action Completion Date:**

**Action** Implement recommendation.

**Action Status:** 02/09/05 - Waiting for Boeing import/export approval. Gene Cook/OZ requested a couple of days to work this issue.

01/05/05 - Changes have been submitted and is under review by Shuttle Avionics Integration.

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## *Open Items Report*

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*Action Number:* 2    *Actionee(s):* Steve Harrison/SCL

*Phone Number(s):*

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*Action Due Date:* 1/31/2005

*Action Completion Date:*

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*Action* Interface definition for control electronics to Vacuum Vent Valve

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*Action Status:*

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## *Open Items Report*

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**Open Item Number:** AMS\_02-CDR-21

**RID Open Date:** 5/1/2003

**RID Closure Date:**

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**Title:** AMS-CDR-4-32: Missing Documents - Avionics

**Affected Document:** N/A

---

**Initiator(s):** Y. Jaurigue/AG-92-J34B

**Initiator(s) Phone Number:** 281-226-5634

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**Description:** From the Flight Avionics Drawing Index, the following items were not available for review in the data package: 39136117 ROEU Connector Panel (Panel A), 39136118 ROEU Connector Panel Bracket (EW, YJ).

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**RID Disposition:** Approved

**RID Status:** Open

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### *Action Item Information*

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**Action Number:** 1    **Actionee(s):** Paul Nemeth/ESCG  
Tim Urban/ESCG

**Phone Number(s):** 281-461-5715  
281-461-5702

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**Action Due Date:** 11/15/2004

**Action Completion Date:**

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**Action** Implement recommendation.

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**Action Status:** 01/05/05 - Changes have been submitted and is under review by Shuttle Avionics Integration.

11/18 - check status of action item on 11/29/04

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## Open Items Report

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**Open Item Number:** AMS\_02-CDR-22

**RID Open Date:** 5/1/2003

**RID Closure Date:**

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**Title:** AMS-CDR-4-33: RS422 DDRS-02/PDIP Cable Assembly

**Affected Document:** SED39136111

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**Initiator(s):** Y. Jaurigue/AG-92-J34B

**Initiator(s) Phone Number:** 281-226-5634

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**Description:** 1. The ``GND`` Pin for PDIP2 on connector P105 will mate with connector J105 pin 7.

2. Please see RID (boeing tracking number) ``Boeing-14 RID AFD AMS-02 wiring Schematic`` against SID39136110. The communication flow in the above document is unclear via the end to end interface nomenclatures. The RS-422 transmit and receive signal can be misinterpreted by the payload (AMS-02) and result in a last minute payload wiring.

Please note there is a concern regarding the second RS-422 interface from PDIP2 P105 to PDIP1 j4 which can potentially interfere with a shared use of the ku-band signal processor. It is preferred that only the required signal interface to PDIP1 used. If the high data rate digital data input of the ku-band signal processor is required per SIG39136083, use connector . (mating connector for P4) on PDIP1 Pin 15 and 16.

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**RID Disposition:**

**RID Status:** Open

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### Action Item Information

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**Action Number:** 1    **Actionee(s):** Paul Nemeth/ESCG

**Phone Number(s):** 281-461-5715

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**Action Due Date:** 10/30/2004

**Action Completion Date:**

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**Action** Supply EME control plan.

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**Action Status:** 02/09/05 - Waiting for Boeing import/export approval. Gene Cook/OZ requested a couple of days to work this issue.

01/05/05 - Changes have been submitted and is under review by Shuttle Avionics Integration.

11/18 - check status of action item on 11/29/04

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## Open Items Report

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**Open Item Number:** AMS\_02-CDR-23

**RID Open Date:** 5/1/2003

**RID Closure Date:**

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**Title:** AMS-CDR-4-34: RS422 T-0/PDIP Cable Assembly

**Affected Document:** SED39136112

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**Initiator(s):** Y. Jaurigue/AG-92-J34B

**Initiator(s) Phone Number:** 281-226-5634

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**Description:** 1. The ``GND`` Pin for PDIP2 on connector P105 will mate with connector J105 Pin 7. Also, the gnd wire routed to connector P4 is inconsistent with drawing SID39136110, which routes the same wire to P103.

2. Please see rid for SID39136110. The communication flow in the above document is unclear via the end to end interface nomenclatures. The RS-422 transmit and receive signal can be misinterpreted by the payload (AMS-02) and result in a last minute payload wiring.

Please note there is a concern regarding the second RS-422 interface from PDIP2 P105 to PDIP1 J4 which can potentially interfere with a shared use of the ku-band signal processor. It is preferred that only the required signal interface to PDIP1 be used. If the high data rate digital data input of the ku-band signal processor is required per SIG39136083, use connector . (mating connector for P4) on PDIP1 Pin 15 and 16.

Also, it is recommended that pin to pin interface from PDIP2 P105 to P103 be as follows:

PDIP2 P105 - 3, 7, 6, 5, 12, 13, 10, 9, 2, 1

PDIP P103 - 3, 7, 13, 12, 5, 6, 10, 9, 2, 1

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**RID Disposition:** Approved

**RID Status:** Open

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### Action Item Information

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## *Open Items Report*

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**Action Number:** 1    **Actionee(s):** Paul Nemeth/ESCG

**Phone Number(s):** 281-461-5715

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**Action Due Date:** 10/30/2004

**Action Completion Date:**

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**Action** Implement recommendation.

---

**Action Status:** 02/09/05 - Waiting for Boeing import/export approval. Gene Cook/OZ requested a couple of days to work this issue.

01/05/05 - Changes have been submitted and is under review by Shuttle Avionics Integration.

11/18 - check status of action item on 11/29/04

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## Open Items Report

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**Open Item Number:** AMS\_02-Doc\_Review-67

**RID Open Date:** 6/24/2004

**RID Closure Date:**

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**Title:** Updates to JSC 29202

**Affected Document:** JSC 29202

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**Initiator(s):** T. Martin/LMSO

**Initiator(s) Phone Number:** 281-333-6114

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**Description:** Vacuum Case ICD changes (JSC-29202B)

1. Change JSC Directorate.
2. Remove Ken Bollweg, J.R. Bates, J. Ross, and Professor K. Luebelsmeyer on signature pages. Add Trent Martin, Steve P. Robin Stafford Allen, and (?? for Aachen).
3. Update Figure 1.2-1, AMS-02 Payload and Experiment
4. Update Figures 2.1-1 and 2.1-2, AMS-02 Payload and Experiment Coordinate Axis and Origin (Note: There are no changes to the dimensions. These models are over 2 years old and out of date)
5. Update Figure 2.2.1-2, Vacuum Case Cross-Section. Dimensions have not changed but figure already exists that contain better representation of the magnet and helium tank.
6. Update Figure 2.2.1-5, O-Ring Groove Detail. Remove o-ring or show compressed. Remove "Note: All dimensions are T1 pending the results of the small scale o-ring test."
7. Update strap port details in Figures 2.2.3-4 through 2.2.3-7 based on assembly issues during the Denver dynamic tests. (These changes were already made on the Vacuum Case drawings)
8. Update the feed thru port callouts on Figures 2.2.4-1 through 2.2.4-3. The locations have not changed.
9. Rename section 2.2.7 from Cryo Service Port to SFHe Tank Fill Port. Update text to remove references to Cryocoolers in section.
10. Update section 2.2.8 and figures to reflect the new SFHe Tank Fill Port. This will include both flight and ground configurations. All other keep in/out zones have not changed.

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## *Open Items Report*

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- 11. Update section 2.2.9 and figures. Several generic holes were removed due to redesign after weight increase.*
- 12. Update section 2.2.11.3 and figures. Several generic holes were removed due to redesign after weight increase.*
- 13. Update section 3.1 to add more detail on the assembly of the cold mass/cmr to the vacuum case.*
- 14. Update section 3.1.2, Strap System.*
- 15. Update section 3.2, Assembly procedure between VC and ACC.*
- 16. Update section 3.3, Assembly procedure between VC and Tracker.*
- 17. Update section 4.0, Vacuum Case vacuum and test requirements.*
- 18. Update document per the attached changes (Vacuum Case ICD Changes.doc)*

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***RID Disposition:*** *Approved*

***RID Status:*** *Open due to pending action*

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### *Action Item Information*

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***Action Number:*** *1*     ***Actionee(s):*** *Phil Mott/ESCG*

***Phone Number(s):*** *281-461-5712*

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***Action Due Date:*** *9/30/2004*

***Action Completion Date:***

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***Action*** *Update as indicated*

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***Action Status:*** *02/09/05 - VC ICD Change Requests to be issued shortly.*

*01/19/05 - VC ICD and SVP Change Requests to be issued before the end of January 2005. Change LMSO to Jacobs or contractor.*

*01/05/05 - The above suggestions have been incorporated into the document. Document currently in internal review at L1 Change request (CR) and document will be going through the AMS Configuration Control Board (CCB) for approval. Once and document have been approved, the RID and action will be closed.*

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*Wednesday, February 23, 2005*

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## *Open Items Report*

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**Open Item Number:** AMS\_02-Doc\_Review-75

**RID Open Date:** 6/24/2004

**RID Closure Date:**

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**Title:** 2nd ACOP System

**Affected Document:** Project Plan & PIA

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**Initiator(s):** M. Capell/MIT

**Initiator(s) Phone Number:** +41 (22) 767 4706

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**Description:** The AMS collaboration requests an additional Express Rack Locker location to house a 2nd ACOP system (plus the corresponding MDL up mass, etc). Additional details will be provided soon, however it is anticipated that this will be run in unplugged redundancy. This change is required to ensure that the data that AMS will be taking over decades (as opposed previously foreseen 3+ years), which is needed to accurately measure the interplanetary radiation environment, will be successfully archived.

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**RID Disposition:**

**RID Status:** Open

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### *Action Item Information*

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**Action Number:** 1    **Actionee(s):**

**Phone Number(s):**

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**Action Due Date:**

**Action Completion Date:**

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**Action**

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**Action Status:**

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